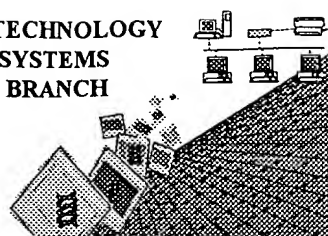


Anthony Smith

BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/719,362
Source: PT/371
Date Processed by STIC: 4/1/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

09/719,362

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
Numbering The numbering under each 3rd amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
"bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s). Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
(OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
(NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000
- 9 Use of n's or Xaa's
(NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.
- 10 Invalid <213>
Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or Artificial Sequence.
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
"bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.

Anthony Smith



1600

RAW SEQUENCE LISTING

DATE: 04/01/2003

PATENT APPLICATION: US/09/719,362

TIME: 07:57:26

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\04012003\I719362.raw

3 <110> APPLICANT: WALLACE, ANDREW
 4 CENTRAL MANCHESTER HEALTHCARE NHS TRUST
 6 <120> TITLE OF INVENTION: NUCLEIC ACIDS
 8 <130> FILE REFERENCE: 7397-2
 10 <140> CURRENT APPLICATION NUMBER: 09/719,362
 11 <141> CURRENT FILING DATE: 2000-12-11
 13 <150> PRIOR APPLICATION NUMBER: PCT/GB99/01691
 14 <151> PRIOR FILING DATE: 1999-06-14
 16 <150> PRIOR APPLICATION NUMBER: 9812674.1 GB
 17 <151> PRIOR FILING DATE: 1998-06-12
 19 <160> NUMBER OF SEQ ID NOS: 39
 21 <170> SOFTWARE: PatentIn Ver. 2.0
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 23
 25 <212> TYPE: DNA
 26 <213> ORGANISM: Artificial Sequence
 28 <220> FEATURE:
 29 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
 30 SEQUENCE FOR AMPLIFICATION OF NF2
 32 <400> SEQUENCE: 1
 33 gtggcaaaca ataccaaatt tac
 35 <210> SEQ ID NO: 2
 36 <211> LENGTH: 48
 37 <212> TYPE: DNA
 38 <213> ORGANISM: Artificial Sequence
 40 <220> FEATURE:
 42 <221> NAME/KEY: Unsure
 43 <222> LOCATION: ~~LocationFrom~~: (12)..(12)
 44 <222> ~~LOCATION: LocationTo~~: 12
 45 Other Information : Unknown
 46 CDSJoin : No
 49 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
 50 SEQUENCES FOR AMPLIFICATION OF NF2
 52 <400> 2
 53 tgtctcactg anacctgcct acctaccat aaaggaatgt aaaccaac
 55 <210> SEQ ID NO: 3
 56 <211> LENGTH: 44
 57 <212> TYPE: DNA
 58 <213> ORGANISM: Artificial Sequence
 60 <220> FEATURE:
 61 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
 62 SEQUENCES FOR AMPLIFICATION OF NF2
 64 <400> SEQUENCE: 3

pp 1, 5-6
 Does Not Comply
 Corrected Diskette Needed

23

see 1.823 of sequence rules
 for correct format

this information does not go in <222>
 response.

<222> is
 for LOCATION
 only.

48

W-->
 WOKS

RAW SEQUENCE LISTING

DATE: 04/01/2003

PATENT APPLICATION: US/09/719,362

TIME: 07:57:26

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\04012003\I719362.raw

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65 aggtaggcag gttagtgag acaaccgctc tccacccatc tcac 44
67 <210> SEQ ID NO: 4
68 <211> LENGTH: 42
69 <212> TYPE: DNA
70 <213> ORGANISM: Artificial Sequence
72 <220> FEATURE:
73 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
74     SEQUENCES FOR AMPLIFICATION OF NF2
76 <400> SEQUENCE: 4
77 agccactacc caaactcctg tatggccctc actcagtctc tg 42
79 <210> SEQ ID NO: 5
80 <211> LENGTH: 42
81 <212> TYPE: DNA
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
86     SEQUENCES FOR AMPLIFICATION OF NF2
88 <400> SEQUENCE: 5
89 acaggagttt gggtagtggc tagagcctca gctggcgctt ac 42
91 <210> SEQ ID NO: 6
92 <211> LENGTH: 43
93 <212> TYPE: DNA
94 <213> ORGANISM: Artificial Sequence
96 <220> FEATURE:
97 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
98     SEQUENCES FOR AMPLIFICATION OF NF2
100 <400> SEQUENCE: 6
101 tcatattagc cgctgcattg ccagatctgc tggacccatc tgc 43
103 <210> SEQ ID NO: 7
104 <211> LENGTH: 43
105 <212> TYPE: DNA
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
110     SEQUENCES FOR AMPLIFICATION OF NF2
112 <400> SEQUENCE: 7
113 ggcaatgcag cggctaatat gaaaggctgt cggactgaaa ctg 43
115 <210> SEQ ID NO: 8
116 <211> LENGTH: 49
117 <212> TYPE: DNA
118 <213> ORGANISM: Artificial Sequence
120 <220> FEATURE:
121 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
122     SEQUENCES FOR AMPLIFICATION OF NF2
124 <400> SEQUENCE: 8
125 cctcattacc ggctgtcaga ctgattctca gaaaagctac cattatcag 49
127 <210> SEQ ID NO: 9
128 <211> LENGTH: 47
129 <212> TYPE: DNA

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RAW SEQUENCE LISTING

DATE: 04/01/2003

PATENT APPLICATION: US/09/719,362

TIME: 07:57:26

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\04012003\I719362.raw

```

130 <213> ORGANISM: Artificial Sequence
132 <220> FEATURE:
133 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
134     SEQUENCES FOR AMPLIFICATION OF NF2
136 <400> SEQUENCE: 9
137 cagtctgaca gccggtaatg aggaggcagt gaagtaaatt tgtggat          47
139 <210> SEQ ID NO: 10
140 <211> LENGTH: 20
141 <212> TYPE: DNA
142 <213> ORGANISM: Artificial Sequence
144 <220> FEATURE:
145 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
146     SEQUENCES FOR AMPLIFICATION OF NF2
148 <400> SEQUENCE: 10
149 aggccaggac tgaccacaca          20
151 <210> SEQ ID NO: 11
152 <211> LENGTH: 25
153 <212> TYPE: DNA
154 <213> ORGANISM: Artificial Sequence
156 <220> FEATURE:
157 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
158     SEQUENCES FOR AMPLIFICATION OF NF2
160 <400> SEQUENCE: 11
161 catgtgtagg ttttttatTTt tgctc          25
163 <210> SEQ ID NO: 12
164 <211> LENGTH: 23
165 <212> TYPE: DNA
166 <213> ORGANISM: Artificial Sequence
168 <220> FEATURE:
169 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER
170     SEQUENCES FOR AMPLIFICATION OF NF2
172 <400> SEQUENCE: 12
173 tgaccacaca gtgacatcat cag          23
175 <210> SEQ ID NO: 13
176 <211> LENGTH: 21
177 <212> TYPE: DNA
178 <213> ORGANISM: Artificial Sequence
180 <220> FEATURE:
181 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
182     AMPLIFY hMLH1 GENE
184 <400> SEQUENCE: 13
185 gatgtttcag tctcagccat g          21
187 <210> SEQ ID NO: 14
188 <211> LENGTH: 49
189 <212> TYPE: DNA
190 <213> ORGANISM: Artificial Sequence
192 <220> FEATURE:
193 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
194     AMPLIFY hMLH1 GENE

```

RAW SEQUENCE LISTING

DATE: 04/01/2003

PATENT APPLICATION: US/09/719,362

TIME: 07:57:26

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\04012003\I719362.raw

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196 <400> SEQUENCE: 14
197 tcatattagc cgctgcattg ccaggaatga taaaccaaga taataaatg          49
199 <210> SEQ ID NO: 15
200 <211> LENGTH: 49
201 <212> TYPE: DNA
202 <213> ORGANISM: Artificial Sequence
204 <220> FEATURE:
205 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
206     AMPLIFY hMLH1 GENE
208 <400> SEQUENCE: 15
209 ggcaatgcag cggctaatat gaattctttt gtaatgtttg agttttgag          49
211 <210> SEQ ID NO: 16
212 <211> LENGTH: 43
213 <212> TYPE: DNA
214 <213> ORGANISM: Artificial Sequence
216 <220> FEATURE:
217 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
218     AMPLIFY hMLH1 GENE
220 <400> SEQUENCE: 16
221 agccactacc caaactcctg tacctgtgag tggatttccc atg              43
223 <210> SEQ ID NO: 17
224 <211> LENGTH: 44
225 <212> TYPE: DNA
226 <213> ORGANISM: Artificial Sequence
228 <220> FEATURE:
229 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
230     AMPLIFY hMLH1 GENE
232 <400> SEQUENCE: 17
233 acaggagttt gggtagtggc taccctcaga cagttttgaa ctgg              44
235 <210> SEQ ID NO: 18
236 <211> LENGTH: 46
237 <212> TYPE: DNA
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
242     AMPLIFY hMLH1 GENE
244 <400> SEQUENCE: 18
245 tctctcactg aatccgccta cctacttggt tgaggagttt ggtgct          46
247 <210> SEQ ID NO: 19
248 <211> LENGTH: 48
249 <212> TYPE: DNA
250 <213> ORGANISM: Artificial Sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
254     AMPLIFY hMLH1 GENE
256 <400> SEQUENCE: 19
257 aggtaggcgg attcagttag agaaccctcc cactatctaa ggtaattg          48
259 <210> SEQ ID NO: 20
260 <211> LENGTH: 44

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RAW SEQUENCE LISTING

DATE: 04/01/2003

PATENT APPLICATION: US/09/719,362

TIME: 07:57:26

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\04012003\I719362.raw

261 <212> TYPE: DNA
262 <213> ORGANISM: Artificial Sequence
264 <220> FEATURE:
265 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
266 AMPLIFY hMLH1 GENE
268 <400> SEQUENCE: 20
269 taacattcca ggctgtcgga ctgaagtagc tggatgagaa gcgc 44
271 <210> SEQ ID NO: 21
272 <211> LENGTH: 50
273 <212> TYPE: DNA
274 <213> ORGANISM: Artificial Sequence
276 <220> FEATURE:
277 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
278 AMPLIFY hMLH1 GENE
280 <400> SEQUENCE: 21
281 cagtccgaca gcctggaatg ttaatttaac acagactttg ctaccaggac 50
283 <210> SEQ ID NO: 22
284 <211> LENGTH: 25
285 <212> TYPE: DNA
286 <213> ORGANISM: Artificial Sequence
288 <220> FEATURE:
289 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
290 AMPLIFY hMLH1 GENE
292 <400> SEQUENCE: 22
293 taaagagtag ctgtactttt cccaa 25
295 <210> SEQ ID NO: 23
296 <211> LENGTH: 22
297 <212> TYPE: DNA
298 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
302 AMPLIFY hMLH1 GENE
304 <400> SEQUENCE: 23
305 taaatccttg tgtcttctgc tg 22
307 <210> SEQ ID NO: 24
308 <211> LENGTH: 18
309 <212> TYPE: DNA
310 <213> ORGANISM: Artificial Sequence
312 <220> FEATURE:
313 <223> OTHER INFORMATION: Description of Artificial Sequence: PRIMER TO
314 AMPLIFY hMLH1 GENE
316 <400> SEQUENCE: 24
317 aagccatacc tgggggttg 18
319 <210> SEQ ID NO: 25
320 <211> LENGTH: 256
321 <212> TYPE: DNA
322 <213> ORGANISM: Unknown
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Description of Unknown Organism: UNKNOWN

*this is an
insufficient
response - please
give source of
genetic
material
(see item 11 on
Env summary sheet) 4/1/03*

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/719,362

DATE: 04/01/2003
TIME: 07:57:27

Input Set : A:\SEQUENCE LISTING.txt
Output Set: N:\CRF4\04012003\I719362.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 12
Seq#:28; N Pos. 54,68,112
Seq#:30; N Pos. 6,375,537
Seq#:31; N Pos. 581